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Abstract

THE ITALIAN NUCLEAR POWER PLANTS

Prof. Arnaldo Maria Angelini
Ente Nazionale Elettricità (E.N.E.L.), Roma, Italia

In the first place, an outline is given on the main construction problems that arose during the installation of the three Italian nuclear power plants (SIMEA, SENN and SELNI) and a brief account is made of the acceptance tests concerning the nuclear and conventional components of the said plants.

The author then illustrates the problems which came up during the initial period of exploitation of the first two plants, in particular as regards the fuel cycle programme - whose optimization constitutes one of the principal factors of nuclear power stations - and the problems inherent to the transportation and chemical treatment of (the) irradiated fuel.

Still in connection with the three Italian nuclear plants, the author estimates the incidence which the capital cost (calculated on the basis of elements concurring to the assessment of direct and indirect costs), as well as the fuel, operation and maintenance costs have on the final cost of producible energy.

Lastly, the author describes the procedure used for the computation of the cost of nuclear kWh for such plants as are equipped with reactors on both natural and enriched uranium.